

LETTER OF ASSURANCE FOR ESSENTIAL PATENT CLAIMS

Please return via mail,
e-mail (as a PDF), or fax:

PatCom Administrator, IEEE-SA Standards Board Patent Committee
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No license is implied by submission of this Letter of Assurance

A. SUBMITTER:

Legal Name: Sharp Corporation ("Submitter")

B. SUBMITTER'S CONTACT INFORMATION (for the purpose of licensing information):

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Note: The IEEE does not endorse the content, or confirm the accuracy or consistency of any contact information or web site listed above.

C. IEEE STANDARD OR PROJECT (e.g., AMENDMENT, CORRIGENDA, OR REVISION):

In accordance with Clause 6.3.5 of the *IEEE-SA Standards Board Operations Manual*, this licensing position is limited to the following:

Standard/Project Number: IEEE P1901
Title: Draft Standard for Broadband over Power Line Networks: Medium Access Control and Physical Layer Specifications

D. SUBMITTER'S POSITION REGARDING LICENSING OF ESSENTIAL PATENT CLAIMS:

In accordance with Clause 6 of the *IEEE-SA Standards Board Bylaws*, the Submitter hereby declares the following (*Check box 1 or box 2 below*):

Note: Nothing in this Letter of Assurance shall be interpreted as giving rise to a duty to conduct a patent search. The IEEE takes no position with respect to the validity or essentiality of Patent Claims or the reasonableness of rates, terms, and conditions of any license agreements offered by the Submitter.

1. The Submitter may own, control, or have the ability to license Patent Claims that might be or become Essential Patent Claims. With respect to such Essential Patent Claims, the Submitter's licensing position is as follows (*must check a, b, c, or d and any applicable subordinate boxes*):
- a. The Submitter will grant a license without compensation to an unrestricted number of applicants on a worldwide basis with reasonable terms and conditions that are demonstrably free of unfair discrimination.
 - (Optional) A sample of such a license (or material licensing terms) that is substantially similar to what the Submitter would offer is attached.
 - b. The Submitter will grant a license under reasonable rates to an unrestricted number of applicants on a worldwide basis with reasonable terms and conditions that are demonstrably free of unfair discrimination.
 - (Optional) These reasonable rates will not exceed _____ (e.g., percent of product price, flat fee, per unit).
 - (Optional) A sample of such a license (or material licensing terms) that is substantially similar to what the Submitter would offer is attached.

- c. The Submitter without conditions will not enforce any present or future Essential Patent Claims against any person or entity making, using, selling, offering to sell, importing, distributing, or implementing such a compliant implementation.
 - d. The Submitter is unwilling or unable to grant licenses according to the provisions of either a or b above or to agree that it will not enforce its Essential Patent Claims as described in c above.
2. After a Reasonable and Good Faith Inquiry, the Submitter is not aware of any Patent Claims that the Submitter may own, control, or have the ability to license that might be or become Essential Patent Claims.

E. SCOPE OF ASSURANCE:

Note: Complete this section only if box 1 in part D above is checked.

The Submitter may, but is not required to, identify one or more of its Patent Claims that it believes might be or become Essential Patent Claims. *(Check box 1 or box 2 below)*

1. When checked, this Letter of Assurance only applies to the Patent Claims identified below that are or become Essential Patent Claims. (If no Patent Claim is identified below, then this Letter of Assurance applies to all Essential Patent Claims supported by the disclosure in the patent or patent applications listed below.)

Patent/Application/Docket Number: _____
 Description/Title (optional): _____

Claim (optional): _____

Patent/Application/Docket Number: _____
 Description/Title (optional): _____

Claim (optional): _____

Patent/Application/Docket Number: _____
 Description/Title (optional): _____

Claim (optional): _____

For additional patents, use additional pages as necessary.

2. When checked, this Letter of Assurance is a Blanket Letter of Assurance. As such, all Essential Patent Claims that the Submitter may currently or in the future have the ability to license shall be available under the terms as indicated above in part D.1; however, a Blanket Assurance shall not supersede any pre-existing or simultaneously submitted specific assurance identifying potential Essential Patent Claims.

F. APPLICATION TO AFFILIATES:

With respect to any Essential Patent Claims that an Affiliate has the ability to license, the Submitter agrees that (i) the licensing positions described in parts C and D above apply to any Essential Patent Claims within the scope of the assurance described in part E; and (ii) the terms of this assurance are binding on each such Affiliate; provided, however, that such representations and commitments shall not apply to Affiliates identified below:

 Organization's Name

 Organization's Name

 Address

 Address

 Contact person

 Contact person

For additional Affiliates, use additional pages as necessary.

G. SIGNATURE:

By signing this Letter of Assurance, you represent that you have the authority to bind the Submitter and all Affiliates (other than those Affiliates excluded above) to the representations and commitments provided in this LOA and acknowledge that users and implementers of the [Proposed] IEEE Standard identified in part C above are relying or will rely upon and may seek enforcement of the terms of this LOA. The Submitter and all Affiliates (other than those Affiliates excluded above) agree not to sell or otherwise transfer any rights in any Essential Patent Claims that they hold, control, or have the ability to license with the intent of circumventing or negating any of the representations and commitments made in this LOA.

The Submitter agrees (a) to provide notice of a Letter of Assurance either through a Statement of Encumbrance or by binding any assignee or transferee to the terms of such Letter of Assurance; and (b) to require its assignee or transferee to (i) agree to similarly provide such notice and (ii) to bind its assignees or transferees to agree to provide such notice as described in (a) and (b).

If, as described in Clause 6 of the *IEEE-SA Standards Board Bylaws*, the Submitter becomes aware of additional Patent Claims not already covered by an existing Letter of Assurance that are owned, controlled, or licensable by the Submitter that may be or become Essential Patent Claims with respect to the standard identified in C above, the Submitter agrees to submit a Letter of Assurance stating its position regarding enforcement or licensing of such Patent Claims.

Print name of authorized person: Toru Chiba

Title of authorized person: Corporate Director and Group General Manager, Corporate R&D Group

Signature of authorized person: *Toru Chiba* Date: July 5, 2007

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Note: This assurance applies from the date of the standard's approval to the date of the standard's withdrawal and is irrevocable upon acceptance by the IEEE-SA.

The IEEE Patent Policy and the procedures used to execute that policy are documented in the IEEE-SA Standards Board Bylaws and the IEEE-SA Standards Board Operations Manual, available at <http://standards.ieee.org/resources/index.html#guides>. The terms and definitions set forth in the IEEE Patent Policy, IEEE-SA Standards Board Bylaws, and IEEE-SA Standards Board Operations Manual in effect as of the date of this Letter of Assurance are incorporated herein.